

Trend Study 11B-4-00

Study site name: Coal Creek.

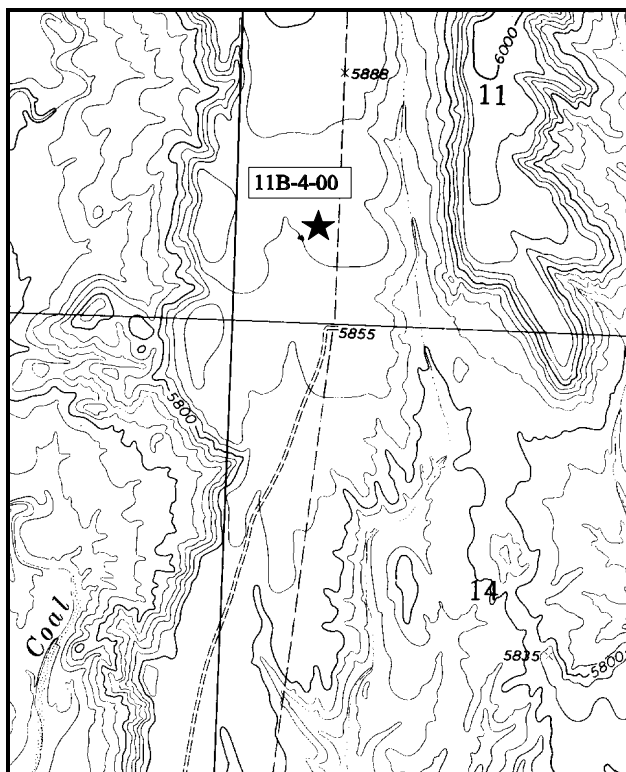
Range type: Big Sagebrush.

Compass bearing: frequency baseline 165°M.

Footmark (first frame placement) 5 feet, footmarks (frequency belts) line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

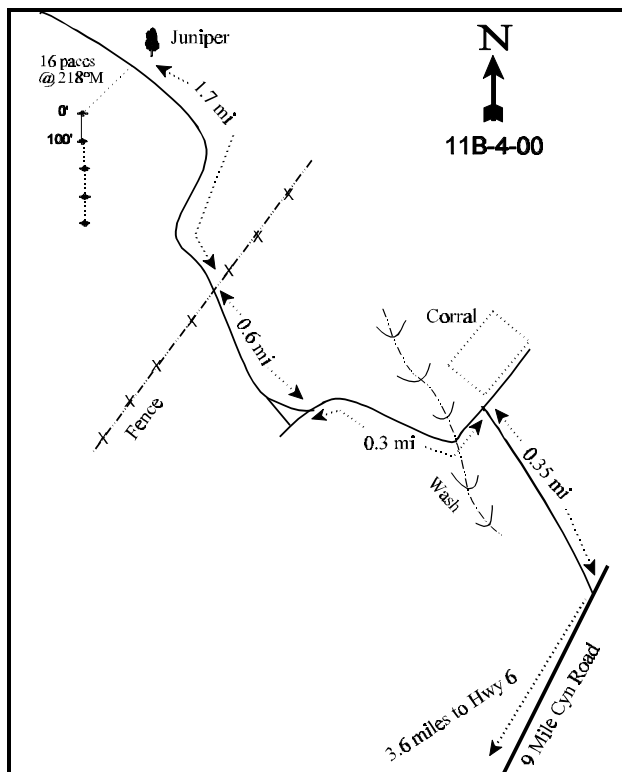
LOCATION DESCRIPTION

From Highway 6 east of Wellington, turn northeast on the Soldier Creek Road (9 Mile Canyon). Stay on this road 3.6 miles, then turn left onto a dirt road. Go 0.35 miles up to a fork near a corral. From the fork proceed 0.3 miles to another fork. Turn right and continue 0.6 miles to a wire gate. Go through the gate and drive 1.7 miles to a small Juniper 20 feet to the right of the road. The transect baseline starts 16 paces from the juniper on a bearing of 165°M. There is a browse tag #7839 on the 0-foot baseline stake.



Map Name: Wellington

Township 14S, Range 11, Section 11



Diagrammatic Sketch

UTM. 4385891.538 N, 529106.094 E

DISCUSSION

Trend Study No. 11B-4 (32-4)

The Coal Creek study is in an open sagebrush flat about four miles from the Book Cliffs on top of a long, narrow, south-sloping plateau at an elevation of 5,860 feet. The area is managed by the BLM as part of the Soldier Canyon allotment. It is grazed by cattle in winter and again in late spring. Permitted numbers are for 117 cattle mid-November through February and 125 cattle March to mid-June. Sign of cattle use was infrequent on this particular site in 1986 and deer pellet groups were encountered only occasionally. A pellet group transect located further up Coal Creek (elevation 6,300) is the lowest elevation pellet group transect in the unit. In the past, it has consistently shown the highest use of any area sampled in the herd unit. Deer days use/acre averaged 44 (109 ddu/ha) between 1981-82 and 1990-91. Numbers dropped considerably in 1991-92 to only 23 ddu/acre (58 ddu/ha) and have averaged only 17 deer days use/acre (41 ddu/ha) between 1991-92 and 1995-96. Numbers are usually higher in hard winters as the deer inevitably move to the lower elevations those years even though thermal cover is limited on the plateau. It does not appear that this study area is still being used by significant numbers of deer or elk since 1986. Quadrat frequency of deer pellet groups was only 15% in 1994 declining to 3% in 2000. A pellet group transect read parallel to the trend site baseline in 2000 estimates only 4 deer days use/acre (10 ddu/ha). These low numbers may be partly due to the mild winter conditions of the past several years. Rabbits appear to be abundant on the site with numerous pellets and trails. They appear to be heavily utilizing shadscale, prickly phlox, and narrowleaf low rabbitbrush.

The soil is moderately deep but compacted. It has a sandy clay loam texture with a soil reaction that is slightly alkaline (7.5 pH). Organic matter is low at only 1%, which ties this site with Airport (#3) as the lowest sites on unit 11 with respect to soil organic matter. Phosphorus is also low at just 6.4 ppm, where values less than 10 ppm may limit normal plant growth and development. Due to the compaction of the soil, effective rooting depth is estimated at just over 13 inches. There is abundant pavement on the surface in exposed areas but little rock within the soil profile. Vegetative and litter cover are both low, yet erosion is minimized due to the level terrain. Although localized soil loss is evident by soil pedestaling under shrubs.

Wyoming big sagebrush dominates the plateau by providing 66% of the total vegetation cover in 1994 and 69% in 2000. It has steadily increased in density from 1,866 plants/acre in 1986, to 2,900 in 1994, and 5,560 by 2000. Vigor has remained good and percent decadence steady, ranging from 21% in 1986 to 24% in 1994. Recruitment in the form of seedlings and young are currently ('00) excellent. The population in 1986 was heavily used with 29% of the shrubs classified as heavily browsed. Annual growth has been minimal, with any browsing causing them to appear they have been heavily hedged and clubbed in appearance. Use in 1994 and 2000 was mostly light with a few plants showing moderate and heavy use. Two desirable shrubs, winterfat and shadscale, occur at fairly low densities and are mostly decadent and over-utilized. Rabbits appear to be using these low growing shrubs. Density of shadscale has remained fairly stable since 1994, but winterfat has declined to the point that it was not sampled in 2000.

Composition in terms of numbers shows that broom snakeweed is by far the most numerous with 11,465 plants/acre estimated in 1986 and 6,280 in 1994. However, currently even with the great increase, they only make up 19% of the total browse cover. Density exploded in 2000 to an estimated 26,900 plants/acre. These individuals are quite small but are vigorous and virtually unutilized. Other invaders and possible indicators of range deterioration are pricklypear cactus and narrowleaf low rabbitbrush. Both have remained at a stable density since 1986.

Grasses and forbs are lacking on the site. Grasses currently ('00) provide only 4% cover with forbs accounting for less than ½ of 1%. There are some small open areas of perennial grasses, but these have been invaded by broom snakeweed. The most common grass species are galleta, bottlebrush squirreltail, needle-and-thread, red

three-awn, and blue grama. Since most of the production is from warm season grasses, the value for spring use is limited. The forb composition is poor.

1986 APPARENT TREND ASSESSMENT

There are a large number of undesirable invader species on this site. Although they indicate a less than optimal range condition, they do not necessarily indicate a future downward trend. However, the hedged form of the Wyoming big sagebrush could indicate a downward trend. An encouraging sign is the presence of young sagebrush. Actually, the area appears more to be recovering from past abuses and with favorable conditions may continue to produce a large amount of winter range forage. Not much can be done to protect the scarce, more palatable shrubs from overuse. Because of inadequate ground cover, presence of erosion pavement, and lack of organic matter, the soil trend appears to be declining.

1994 TREND ASSESSMENT

With the lack of significant slope and percent bare ground changing little, trend for the soils is considered stable but in less than satisfactory condition. Even though the key browse species, Wyoming big sagebrush, has more plants that are now judged as decadent, this is more than compensated for by the exceptionally high biotic potential (# of seedlings) of 99%. Both shadscale and winterfat have greatly improved vigor and much lower rates of decadency. Trend for key browse is up, but the broom snakeweed population should be watched closely for any unusual increases in its population. The trend for the herbaceous understory is slightly up, but still in very poor condition with a total of just 3% cover for all species combined.

TREND ASSESSMENT

soil - stable (3)

browse - up (5)

herbaceous understory - slightly up, but still poor (4)

2000 TREND ASSESSMENT

Trend for soil appears stable but still in poor condition with the ratio of bare ground to protective cover remaining unchanged. Litter and total vegetation cover are low while unprotected bare ground is high and herbaceous vegetation scarce. Interspaces between shrubs contain abundant erosion pavement while soil is pedestaled under the shrubs. Cryptogamic cover has increased but these are concentrated under shrub canopies. There is obviously some localized soil erosion occurring during high intensity storms but it is minimized by the level terrain. Trend for browse is up for the key species Wyoming big sagebrush. Density has increased due to a large number of young plants counted this year. Seedlings are also abundant. The number of decadent plants has increased (700 to 1,240 plants/acre) but this is more than compensated by the large number of young. Use is mostly light and vigor good. Rabbits appear to be heavily utilizing the other preferred browse shadscale. It appears to have a stable population but vigor is poor and percent decadence high. One negative aspect of the browse trend is the dramatic 4-fold increase in density of broom snakeweed since 1994 (6,280 plants/acre to 26,900). Trend for the herbaceous understory is up slightly but grasses and forbs are still lacking. Combined, they provide only 4% total cover. Grasses are diverse and sum of nested frequency for the most abundant grasses increased slightly. Sum of nested frequency of forbs declined.

TREND ASSESSMENT

soil - stable but in poor condition (3)

browse - up for Wyoming big sagebrush (5)

herbaceous understory - slightly up, but still poor (4)

HERBACEOUS TRENDS --

Herd unit 11B, Study no: 4

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'86	'94	'00	'86	'94	'00	'94	'00
G	<i>Aristida purpurea</i>	a ⁻	b ¹⁰	b ⁷	-	5	4	.08	.16
G	<i>Bouteloua gracilis</i>	a ¹⁷	b ⁴¹	c ⁶⁵	8	18	26	1.04	1.86
G	<i>Hilaria jamesii</i>	a ⁻	b ³⁴	a ⁵	-	12	2	.66	.18
G	<i>Oryzopsis hymenoides</i>	a ⁻	b ⁹	b ¹⁵	-	5	8	.03	.44
G	<i>Poa fendleriana</i>	a ⁻	b ³	a ⁻	-	3	-	.01	-
G	<i>Sitanion hystrix</i>	a ²⁸	a ¹⁶	b ⁶⁵	12	6	28	.20	.81
G	<i>Stipa comata</i>	a ¹	a ¹⁴	b ³¹	1	7	12	.57	.77
Total for Annual Grasses		0	0	0	0	0	0	0	0
Total for Perennial Grasses		46	127	188	21	56	80	2.61	4.23
Total for Grasses		46	127	188	21	56	80	2.61	4.23
F	<i>Astragalus convallarius</i>	-	2	-	-	1	-	.00	-
F	Cruciferae	-	3	-	-	1	-	.03	-
F	<i>Cryptantha</i> spp.	-	4	-	-	1	-	.15	-
F	<i>Eriogonum cernuum</i> (a)	-	2	-	-	1	-	.00	-
F	<i>Eriogonum ovalifolium</i>	a ⁻	b ³	ab ¹	-	3	1	.01	.00
F	<i>Lappula occidentalis</i> (a)	-	b ⁴	a ⁻	-	3	-	.01	-
F	<i>Leucelene ericoides</i>	-	4	4	-	2	2	.15	.03
F	<i>Lepidium montanum</i>	a ⁻	c ²⁴	b ⁴	-	10	3	.08	.01
F	<i>Sphaeralcea coccinea</i>	3	1	-	1	1	-	.00	-
Total for Annual Forbs		0	6	0	0	4	0	0.01	0
Total for Perennial Forbs		3	41	9	1	19	6	0.43	0.05
Total for Forbs		3	47	9	1	23	6	0.46	0.05

Values with different subscript letters are significantly different at $\alpha = 0.10$ (annuals excluded)

BROWSE TRENDS --

Herd unit 11B, Study no: 4

T y p e	Species	Strip Frequency		Average Cover %	
		'94	'00	'94	'00
B	<i>Artemisia tridentata</i> <i>wyomingensis</i>	74	82	15.10	16.59
B	<i>Atriplex confertifolia</i>	19	20	.45	.31
B	<i>Ceratoides lanata</i>	2	0	-	-
B	<i>Chrysothamnus viscidiflorus</i> <i>stenophyllus</i>	37	38	1.63	.66
B	<i>Echinocereus</i> spp.	0	1	-	.00
B	<i>Gutierrezia sarothrae</i>	81	95	2.20	4.37

Type	Species	Strip Frequency		Average Cover %	
		'94	'00	'94	'00
B	Juniperus osteosperma	0	1	-	-
B	Leptodactylon pungens	5	7	.30	.30
B	Opuntia spp.	28	34	.25	.48
Total for Browse		246	278	19.96	22.75

BASIC COVER --

Herd unit 11B, Study no: 4

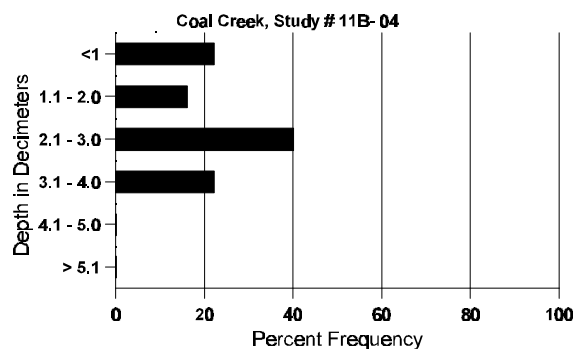
Cover Type	Nested Frequency		Average Cover %		
	'94	'00	'86	'94	'00
Vegetation	238	271	3.75	21.64	28.34
Rock	284	129	0	10.46	1.77
Pavement	291	319	18.25	4.25	17.54
Litter	369	320	39.00	20.09	17.54
Cryptogams	135	216	3.50	3.26	10.94
Bare Ground	339	360	35.50	35.29	47.24

SOIL ANALYSIS DATA --

Herd Unit 11B, Study # 4, Study Name: Coal Creek

Effective rooting depth (inches)	Temp °F (depth)	pH	%sand	%silt	%clay	%OM	PPM P	PPM K	dS/m
13.20	50.2 (11.73)	7.5	54.0	22.0	24.0	1.0	6.4	140.8	0.6

Stoniness Index



PELLET GROUP FREQUENCY --

Herd unit 11B, Study no: 4

Type	Quadrat Frequency		Pellet Transect	
			Pellet Groups per Acre	Days Use per Acre (ha)
	'94	'00	00	00
Rabbit	45	39	374	N/A
Elk	-	1	-	-
Deer	15	3	52	4 (10)

BROWSE CHARACTERISTICS --

Herd unit 11B, Study no: 4

A G R E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Artemisia tridentata wyomingensis																	
S	86	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1
	94	132	-	-	11	-	-	-	-	-	143	-	-	-	2860		143
	00	22	-	-	56	-	-	23	-	-	101	-	-	-	2020		101
Y	86	2	2	1	-	-	-	-	-	-	5	-	-	-	333		5
	94	4	-	-	-	-	-	-	-	-	4	-	-	-	80		4
	00	68	-	-	32	-	-	15	-	-	115	-	-	-	2300		115
M	86	-	13	4	-	-	-	-	-	-	15	2	-	-	1133	14 15	17
	94	89	15	2	-	-	-	-	-	-	106	-	-	-	2120	20 31	106
	00	68	23	3	-	4	2	1	-	-	101	-	-	-	2020	22 35	101
D	86	-	3	3	-	-	-	-	-	-	6	-	-	-	400		6
	94	28	2	5	-	-	-	-	-	-	22	-	-	13	700		35
	00	38	11	2	4	5	2	-	-	-	32	1	-	29	1240		62
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	480		24
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	480		24
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
		'86			64%			29%			00%						
		'94			12%			05%			09%						
		'00			15%			03%			10%						
Total Plants/Acre (excluding Dead & Seedlings)												'86	1866	Dec:	21%		
												'94	2900		24%		
												'00	5560		22%		

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Atriplex confertifolia																		
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	94	15	2	-	1	-	-	-	-	-	18	-	-	-	360	10	13	18
	00	-	-	1	-	1	5	-	-	-	7	-	-	-	140	8	14	7
D	86	-	-	2	-	-	-	-	-	-	-	-	2	-	133			2
	94	10	-	2	-	-	-	-	-	-	10	-	-	2	240			12
	00	-	1	-	-	-	8	1	-	9	-	-	-	19	380			19
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	80			4
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			100%			100%			+78%							
'94		07%			07%			07%			-10%							
'00		07%			85%			70%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	133	Dec:	100%			
												'94	600		40%			
												'00	540		70%			
Ceratoides lanata																		
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	-	-	-	1	-	-	-	-	-	1	-	-	-	20		1	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	94	1	-	-	-	-	-	-	-	-	1	-	-	-	20	6	7	1
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
D	86	2	-	6	-	-	-	-	-	-	2	-	6	-	533			8
	94	-	1	-	-	-	-	-	-	-	-	-	-	1	20			1
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			75%			75%			-89%							
'94		33%			00%			33%										
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	533	Dec:	100%			
												'94	60		33%			
												'00	0		0%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches)		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4		Ht.	Cr.	
Chrysothamnus viscidiflorus stenophyllus																		
S	86	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	94	1	-	-	-	-	-	-	-	-	1	-	-	20			1	
	00	1	-	-	-	-	-	-	-	-	1	-	-	20			1	
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	00	1	-	-	-	-	-	-	-	-	1	-	-	20			1	
M	86	1	-	-	-	-	-	-	-	-	1	-	-	66	3	7	1	
	94	55	1	2	7	-	-	-	-	-	59	-	6	1300	7	10	65	
	00	2	1	1	1	-	2	-	-	-	7	-	-	140	4	7	7	
D	86	26	1	-	-	-	-	-	-	-	22	-	2	3	1800		27	
	94	17	-	4	1	-	-	-	-	-	18	-	-	4	440		22	
	00	19	-	1	8	-	-	32	-	-	10	-	-	50	1200		60	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	00	-	-	-	-	-	-	-	-	-	-	-	-	380			19	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		04%			00%			18%			- 7%							
'94		01%			07%			11%			-22%							
'00		01%			06%			74%										
Total Plants/Acre (excluding Dead & Seedlings)													'86	1866	Dec:	96%		
													'94	1740		25%		
													'00	1360		88%		
Echinocereus spp.																		
M	86	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	
	00	-	-	-	1	-	-	-	-	-	1	-	-	20	3	12	1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%										
'94		00%			00%			00%										
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)													'86	0	Dec:	-		
													'94	0		-		
													'00	20		-		

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches)		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4		Ht.	Cr.	
Gutierrezia sarothrae																		
S	86	13	-	-	-	-	-	-	-	-	12	-	-	1	866		13	
	94	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
	00	5	-	-	-	-	-	-	-	-	5	-	-	-	100		5	
Y	86	25	-	-	-	-	-	-	-	-	24	-	-	1	1666		25	
	94	35	-	-	1	-	-	-	-	-	36	-	-	-	720		36	
	00	47	-	-	5	-	-	-	-	-	52	-	-	-	1040		52	
M	86	100	-	-	-	-	-	-	-	-	98	-	1	1	6666	7	8	
	94	242	-	-	11	-	-	-	-	-	239	-	14	-	5060	8	7	
	00	1164	-	-	19	-	-	-	-	-	1183	-	-	-	23660	4	5	
D	86	47	-	-	-	-	-	-	-	-	38	-	4	5	3133		47	
	94	25	-	-	-	-	-	-	-	-	22	-	-	3	500		25	
	00	109	-	-	-	-	-	1	-	-	55	-	2	53	2200		110	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	360		18	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	740		37	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			07%			-45%							
'94		00%			00%			05%			+77%							
'00		00%			00%			04%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	11465	Dec:	27%			
												'94	6280		8%			
												'00	26900		8%			
Juniperus osteosperma																		
Y	86	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	1	-	-	-	-	-	-	-	-	-	1	-	-	20		1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%										
'94		00%			00%			00%										
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	66	Dec:	-			
												'94	0		-			
												'00	20		-			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Leptodactylon pungens																		
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	3	-	-	-	-	-	-	-	-	3	-	-	-	60		3	
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	94	21	-	-	-	-	-	-	-	-	21	-	-	-	420	5	7	
	00	1	-	-	2	-	-	-	-	-	3	-	-	-	60	8	7	
D	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	1	-	-	-	-	-	-	-	-	-	-	-	1	20		1	
	00	3	-	14	-	-	-	12	-	-	22	-	-	7	580		29	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	60		3	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%										
'94		00%			00%			05%			+37%							
'00		00%			40%			20%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	0%			
												'94	440		5%			
												'00	700		83%			
Opuntia spp.																		
Y	86	1	-	-	-	-	-	-	-	-	-	1	-	66			1	
	94	1	-	-	-	-	-	-	-	-	1	-	-	20			1	
	00	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
M	86	17	-	-	-	-	-	-	-	-	11	-	6	-	1133	4	6	
	94	51	-	-	-	-	-	-	-	-	51	-	-	-	1020	3	11	
	00	40	-	-	1	-	-	-	-	-	41	-	-	-	820	4	8	
D	86	2	-	-	-	-	-	-	-	-	1	-	1	-	133		2	
	94	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
	00	19	-	-	1	-	-	-	-	-	12	-	2	6	400		20	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	100		5	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			40%			-20%							
'94		00%			00%			00%			+13%							
'00		00%			00%			13%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	1332	Dec:	10%			
												'94	1060		2%			
												'00	1220		33%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Pinus edulis																	
S	86	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
'86		00%			00%			00%									
'94		00%			00%			00%									
'00		00%			00%			00%									
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	-		
												'94	0		-		
												'00	0		-		